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INVESTMENT, PRICES, BUDGET AND FINANCE

CAPITAL INVESTMENT INDICATORS ANALYZED

Moscow IZVESTIYA AKADEMII NAUK SSSR - SERIYA EKONOMICHESKAYA in Russian No 4,
Jul-Aug 81 pp 83-91

[Article by A. E. Tashchev and V. N. Smagin: "On Indicators of General and Comparative Efficiency of Capital Investments and New Technology"]

[Text] The article examines the fundamental identity of optimal variants of the estimate of the efficiency of capital investments and new technology, calculated according to indicators of general and comparative efficiency. The nature of errors is explained in proofs of inconsistency of these indicators, the advantages of the indicator of comparative efficiency are noted.

The increase in the efficiency of national production and the achievement of better final results of the national economy, as during the preceding years, have to do with the basic economic tasks of the development of the country during 1981-1985 and for the period up to 1990 [1]. The successful solution of the tasks mentioned depends in many respects on the correct choice of the directions of capital investments, and this requires correct methodological foundations for the estimate of their efficiency.

The methods of determining the economic efficiency of capital investments in 1969 and 1979 recommend the use of indicators of both general and comparative efficiency for the selection of the best investment variants. At the level of the enterprise, these indicators appear in the form of profitability and expenditures adduced [2].

The question of the selection of an indicator for the calculation of the efficiency of capital investments has remained open to discussion for many years [3]. Advocates of the selection of variants according to the criterion of the minimum of expenditures adduced are, for example, L. A. Vaag, D. S. L'vov. At the same time, Z. V. Atlas, V. O. Chernyavskiy, V. G. Lebedev and others regard it as correct to select the variants according to the cost accounting indicator of the maximum of profitability. To prove their point of view, both sides cite conditional examples from which it is apparent that variants answering the minimum of expenditures adduced and the maximum of profitability can differ significantly.

In order to understand the nature of such a proposition, we will attempt to determine the general relations in which the aforementioned indicators find themselves.

Let us begin with expenditures adduced

$$3 = C + E_n K. \quad (1)$$

As is known, the minimum of this criterion takes place where the derivative of 3 is equal to zero, i. e., at the point where the condition

$$C' + E_n = 0$$

is fulfilled

or

$$-C' = E_n. \quad (2)$$

Let us designate K and C in this point through K_0 and C_0 . Then we obtain

$$3^{\min} = C_0 + E_n K_0. \quad (3)$$

The indicator of general efficiency has the form:

$$R = \frac{U - C}{K}. \quad (4)$$

It reaches the extremum in the point $R' = 0$, i. e., where

$$R' = \frac{K(-C') - (U - C)}{K^2} = \frac{-U + C - C'K}{K^2} = 0$$

from where we find the condition of optimality

$$U = C - C'K. \quad (5)$$

It is easy to show through the second derivative from the general efficiency R'' that in this point there takes place the maximum R for any $C=f(K)$, which is the diminishing concave down function. It is precisely through such a function that they express the dependence of C on K, since it characterizes the decreasing efficiency of capital investments during their growth.

Let us clarify what will be the value of the indicator R at the point of the minimum of expenditures adduced. At this point (see formula (2)) there takes place: $-C' = E_n$, $C = C_0$ and $K = K_0$ and the condition of the maximum of profitability (5) takes the form:

$$U = C_0 + E_n \cdot K_0 = 3^{\min}. \quad (6)$$

Thus, if the price for production is to be established on the level of the minimum of expenditures adduced, or the full national economic prime cost (according to the expression of V. V. Novozhilov), the minimum of the last indicator corresponds to the maximum of profitability. At the same time, this maximum of profitability is equal to

$$R^{\max} = \frac{C_0 + E_n K_0 - C_0}{K_0} = E_n.$$

There is nothing surprising in the fact that $R^{\max} = E_H$ and that this maximum takes place at $C + E_H K = \min$. In the presence of the optimal regime of the functioning of the economy, i. e., in the presence of optimal volumes of output produced and optimal prices, R is the price of the hire of capital resource or the annual effect of capital resources during their exploitation. It is maximal in this regime [4].

Thus, in the presence of the optimal regime of the functioning of the economy, the indicators of general and comparative efficiency are equivalent in the sense that they determine one and the same variant of production (K_0 , C_0) as the most efficient.

The result thus obtained is a paraphrase of the idea of optimality: the economy must attain the goals that have been set for it in the presence of the minimum of expenditures ($3 = \min$), which, it goes without saying, is possible if capital resources are used with maximum efficiency ($R = \max$). It is not necessary to talk in the last case especially about current expenditures since they are synonymously determined through capital expenditures with the aid of the relation $C = f(K)$.

Now, in order to understand the character of the contradictions operating in the examination of the efficiency of different variants of capital investments according to the indicators 3 and R in the examples that have been proposed in the literature, we shall find the maximum R in conditions when prices are not optimal. Let us assume that the price is given by the expression

$$U = (C_0 + E_H K_0) + \alpha = U_0 + \alpha, (\alpha \geq 0).$$

Moreover, if $\alpha > 0$, the price exceeds the optimal level U_0 , and if $\alpha < 0$, it is below it.

Let us write the value of the indicator of general efficiency (4) in the form

$$R_\alpha = \frac{U - C}{K} = \frac{U_0 + \alpha - C}{K} = \frac{U_0 - C}{K} + \frac{\alpha}{K} = R_{\alpha=0} + \frac{\alpha}{K}. \quad (7)$$

From this it follows that R_α represents the family cupola-shaped curves inserted one into the other, which do not intersect anywhere. Moreover, if $\alpha_2 > \alpha_1$, then $R_{\alpha_2} > R_{\alpha_1}$, for any K . Let us find the derivative of R_α through K :

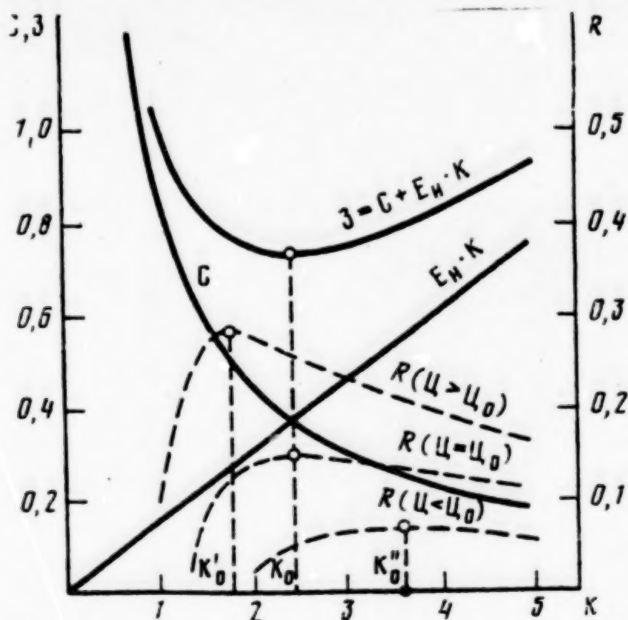
$$R'_\alpha = R'_{\alpha=0} - \frac{\alpha}{K^2}.$$

Since at the point $K = K_0$, as we earlier demonstrated $R'_{\alpha=0} = 0$

$$R'_\alpha = -\frac{\alpha}{K^2} \quad (8)$$

From the equation (8) it follows that in the presence of $\alpha > 0$ the function R_α at the point K_0 decreases and, consequently, its maximum is situated to the left of K_0 . Moreover, since $R_{\alpha} > R_{\alpha=0}$, this maximum is greater than $R_{\alpha=0}^{\max}$. Analogously, if $\alpha < 0$, the function R_α reaches its maximum value to the right of the point $K = K_0$, and this value is less than $R_{\alpha=0}^{\max}$.

From this it follows that the value of the price above the optimal level $U_0 = 3^{\min}$ increases the profitability of capital investments and displaces its maximum to the left of K_0 , i. e., orients toward less capital-intensive variants in comparison with the indicator of expenditures adduced. And the other way around, the



The dependence of production cost (C), expenditures adduced (3) and profitability (R) on the magnitude of capital investments (K). Profitability is constructed for $U = 3^{\min} = 0,735 - R(U = U_0)$, for $U = 1,0 - R(U > U_0)$ and for $U = 0,5 - R(U < U_0)$.

establishment of a price below 3^{\min} lowers the profitability of capital investments and simultaneously displaces its maximum to the right of K_0 , i. e., leads to the recognition of more capital-intensive variants as efficient.

In order to give visual clearness to these general conclusions, a standard example is presented in Fig. 1. In the example the relation $C = \frac{0,9}{K}$ is assumed.

In the presence of $E_H = 0,15$ the minimum of expenditures adduced takes place, when $K_0 = 2,45$, whence $C_0 = \frac{0,9}{2,45} = 0,367$ and $3^{\min} = 0,367 + 0,15 \times 2,45 = 0,735$. If it is assumed that $U_0 = 3^{\min} = 0,735$, profitability has the maximum at this point and it is equal to $R^{\max} = E_H = 0,15$.

Let us change the price in such a way that it deviates from the optimal value both in the large ($U = 1,0$ instead of $0,735$) and in the lesser side from the optimal level. In the first case ($U = 1,0$) profitability is maximal in the presence of $K'_0 = 1,8$, whence $C'_0 = 0,5$ and $R^{\max} = 0,278$. It is almost twice as high ($0,278$ as opposed to $0,15$). Expenditures^{1,0} adduced increase here from $0,735$ to $0,77$.

In the second case ($U = 0,5$), the maximum of profitability takes place when $K''_0 = 3,6$, whence $C''_0 = 0,250$ and $R^{\max}_{0,5} = 0,0694$, i. e., almost twice smaller ($R^{\max}_{0,735} =$

=0,15). The expenditures adduced, as in the first case, grow (from 0,735 to 0,79).

As is evident from the example that has been examined, the level of prices for production essentially changes the concept of the best variant of capital investments. Indicators of general and comparative efficiency are equivalent only when the price is established at the level of minimal expenditures adduced. In the remaining cases we are dealing with classic problem of vectorial optimization.

If the price is higher than the optimal, the presence of two criteria leads to the division of the range of possible capital investments into two spheres (see Fig.): the sphere of the agreement of the criteria $[0, K_0']$ and $[K_0, \infty]$ and the sphere of compromise (K_0', K_0) . In the sphere of agreement general and comparative efficiency improve and deteriorate simultaneously; in the sphere of compromise the improvement of one indicator results in the deterioration of the other. Analogously, if the price is less than the optimal, the sphere of agreement is $[0, K_0]$ and $[K_0'', \infty]$, and the sphere of compromise is (K_0, K_0'') .

For enterprises whose production prices exceed the optimal level, after passing point K_0' , it is disadvantageous to perfect their technical equipment (it lowers profitability although expenditures for social labor for production output can still be lowered). The other way around, for enterprises with a production price that is too low, it is advantageous to increase capital investments even beyond K_0 in order to increase profitability although this raises the expenditures for social labor.

The information that has been presented makes it possible to understand the reason for the inconsistencies arrived at by the advocates of the selection of variants based on expenditures adduced and profitability. The examples constructed by them illustrate in the selection of variants the transition from the sphere of agreement of criteria to the sphere of compromise, and vice versa. In these examples, the price is fixed at a level either higher or lower than the optimal level. Here one can obtain any results, since one of the indicators $(C+E_H K)$ is not connected with price and is objective with regard to our propositions concerning the price of production, and the other

$$\left(R = \frac{U - C}{K}\right) - \text{does not directly depend on it.}$$

Thus, in the sphere of agreement the indicators of general and comparative efficiency point to one and the same direction (although with different degree of objectivity) in the change of capital intensiveness of production with the goal of increasing its efficiency. In the sphere of compromise the recommendations of the indicators are contradictory. Here the attempt to improve the profitability leads to an increase in aggregate expenditures for production output and moves away from the national economic optimum.

To the extent of the perfection of price formation, and more precisely, with the fuller realization of all conditions necessary for the transition to the optimal regime of the functioning of the economy, the sphere of the compromise of criteria will decline, and in the limit it turns out to make no difference which of them

is used. For the time being, if we consider two indicators designed to solve identical tasks, it is methodologically more correct to use the one which is to a smaller extent dependent on business cycle factors (4). The remaining factors (C and K) are identical in both indicators and, therefore, although they are equivalent from the viewpoint of economic theory, their practical value is different--the indicator of expenditures adduced provides better orientation toward the achievement of the national economic optimum.

Fears that price can influence the policy of capital investments are entirely justified and have been repeatedly expressed. N. Ya. Petrakov showed that "if the cost accounting link controls a significant share of the production of a branch and it is left with the right to influence the level of prices and exert influence on the determination of plan volumes of production output, its interests can diverge from the interests of the national economy," and in this case "the point of its local optimum does not coincide with the point of the national economic optimum." [5].

Hence follows the expediency of directing investment activity of an enterprise on the basis of estimation indicators which either do not include the production price in their structure or include it in such a way that it does not influence the selection of the optimal decision concerning capital investments. The indicator of expenditures adduced is inconvenient for these purposes in the sense that in cost accounting practice it has not been used; the indicator of profitability, as we have become convinced, is too sensitive to the selection of prices. A more acceptable indicator, as D. S. L'vov [6] has correctly noted, may be the indicator of profit, which is determined by the formula:

$$\Pi = \Pi - (C + E_H K) \quad (9)$$

It is easy to see that, when $C + E_H K = \min$, $\Pi = \max$. The non-optimality of the price influences only the level Π , but does not influence the selection of the best variant of capital investments, which will coincide with the optimum according to $C + E_H K$. The indicator calculated according to the formula (9) is neither general nor accounting profit. It distinguishes itself from general profit by the component $E_H K$, from accounting profit--by the fact that the payment for capital assets is significantly less than $E_H K$. With the use of accounting profit as investment orientator, enterprises will select more capital-intensive variants than is dictated by the interests of the national economy. In order to make it possible for the indicator of accounting profit to be used for the selection of the directions of capital investments, it is necessary to raise the payment for capital assets to the level E_H .

We may consider it as no accident that today the practice of cost accounting activity devotes less and less attention to the indicator of profitability. While the economy functioned in a regime which was far from the optimal, the use of the indicator of profitability as a regulating parameter was justified--together with the growth of profitability the expenditures adduced declined, since the decisions being examined, as a rule, were found in the sphere of agreement of criteria. To the extent of the movement toward the optimum, the use of the indicator of profitability in planning practice more and more often leads to risk of examining

and taking decisions relating to the sphere of compromise, where orientation toward the indicator of profitability calls forth the growth of socially necessary expenditures.

Table 1.

Variant	K	C	$C+E_H K$	$R = \frac{U-C}{K} (U=5,0)$
I	2,0	4,2	4,5	0,4
II	4,0	3,6	4,2	0,35
III	4,8	3,0	3,72	0,42

What role does the indicator of general efficiency of capital investments play and how is its necessity justified? To answer this question, we shall turn to one of the last works [7]. It examines the variants of capital investments which we cite in Table 1.

Comparing the variants I and II, the authors observe that although the IInd variant provides for a smaller level of expenditures adduced and therefore has advantages over the Ist variant, nevertheless the lowering of profitability serves as a signal for the search of a fundamentally new technical solution. Such a solution is the IIIrd variant, which not only lowers C , but also increases R . Hence the conclusion is drawn concerning the necessity of using the indicator of general efficiency, which makes possible the formation of correct initial positions for calculations of comparative efficiency.

We do not consider such a conclusion irreproachable. We have shown the great sensitivity of the indicator of profitability to the change in price, and therefore it makes sense to repeat the calculations of profitability in the indicated variants for different levels of price. As the initial price (in conformity with a conception of price formation that is more appropriate for the case to be examined) we take the price that is equal to the expenditures adduced (in the Ist variant). The results of the calculation for $U=4,5; 4,6; 4,7; 4,8; 4,9$, and $5,0$ are presented in Table 2. Analyzing these data, one can say that the conclusion

Table 2.

Variant	K	C	$C+E_H K$	$R = (U-C)/K$					
				$U=4,5$	$U=4,6$	$U=4,7$	$U=4,8$	$U=4,9$	$U=5,0$
I	2,0	4,2	4,5	0,15	0,2	0,25	0,3	0,35	0,4
II	4,0	3,6	4,2	0,225	0,25	0,275	0,3	0,325	0,35
III	4,8	3,0	3,72	0,312	0,333	0,354	0,375	0,396	0,42

of the authors of the indicated article is true only with regard to the prices that are equal to $4,9$ and $5,0$, which, by the way, by far exceed the level of the expenditures adduced. In the presence of prices that are closer to the level of socially necessary expenditures (and such are prices that are not simply equal to expenditures adduced, but equal to the minimum of expenditures adduced), the indicator of profitability yields nothing new by comparison with the indicator of

expenditures adduced: the profitability grows where expenditures adduced decline, and it does not provide signals about anything.

It must be noted that in the examples about this subject being examined price is taken as some kind of absolute indicator, at the same time it is a function of socially necessary expenditures for production output and, consequently, cannot remain unchanged when there is change in the conditions of production. Therefore, the examination for proof of simplified numerical examples, in which some parameters change (in this case C and K), but others are fixed (4), although the latter are dependent on the former, leads in some sphere of the change of the variables to incorrect conclusions. This is a general shortcoming of such numerical models.

The attempt to defend the indicator of general (absolute) efficiency of capital investments that has been analyzed must be acknowledged as unsuccessful. The failures with this indicator lead investigators to the realization of the necessity to make increasingly broad use of the indicator of expenditures adduced. For example, V. N. Mosin and A. I. Yakovlev take the view that "the indicator of expenditures adduced can be use not only for the selection of an efficient method of output of a certain product, but also for estimating change in the structure of national production as a whole, taking into account the latest achievements in scientific-technical progress" [8].

Sometimes the opinion is expressed that the general efficiency is needed when there is no basis for the comparison of capital investments being planned, when it is merely necessary to determine the expediency of capital investments in principle. However, in this case, too, a comparison is carried out all the same, but only already with realized capital investments materialized in operating producer goods. And only after acknowledgment of the new capital investments as efficient on the grounds that their profitability is not less than that of operating producer goods, do they move on to the examination of different variants of technical solutions on the basis of comparative efficiency. Such a proposition does not flow from theoretical considerations, but from practical ones, induced by many years of experience in using the indicator of profitability. In fact, if production is not new, if it interchangeable with any of the existing production, a basis for comparison already exists and the indicator of comparative efficiency can be used. If production is in principle new, but the necessity of its creation has been acknowledged on the basis of some kind of considerations, the question of its profitability is the question of price formation (by virtue of the selection of an appropriate price the profitability of the new production can be established at any level that is necessary for the acknowledgment of it as efficient).

The category of "effect" by its intrinsic content always suggests the comparison of different solutions; the category "efficiency", defined as the relation of effect to expenditures, for this reason also contains in itself the comparison of solutions. However, the form of "efficiency" may be such that this comparison is veiled, as in the case of the indicator of profitability. In this indicator the comparison of price and prime cost of production takes place. Moreover, price appears in a form that is not logically connected with the magnitude of current and capital expenditures for the output of production, as must follow from the

conceptions of price formation. Such an unjustified introduction of price serves as a source of misunderstandings from the estimate of the efficiency of capital investments according to the indicator of profitability. Moreover, the inconsistencies arising between the two basic indicators of efficiency necessitate, in order to eliminate them, the complementary examination of a series of secondary indicators, which in their turn are inconsistent, etc.

The perversion of the situation induces the practical workers of planning organs to solve it in their own way. Thus, in the "Methodological Instructions Concerning the Efficiency of Plan and Draft Solutions of the Technical Reequipment of the Production of Industrial Enterprises (Associations) of the City of Moscow" [9] it is recommended in conformity with "Standard Methodology" to calculate both absolute and comparative efficiency. But in the last part of the "Methodological Instructions", which is called "Concluding Estimate and Selection of Projects for Inclusion in the Plan for 1981-1990", only the difference of expenditures adduced is named as such an estimate.

We believe that the indicators of comparative and general efficiency, at least at the lower level of the economy (the level of the enterprise and individual technical-economic decisions) are found in that relation in which the long-term and short-term goals of production consist.

The indicator of comparative efficiency permits finding the best variants of capital investments and, consequently, selecting the best variants of the development of production (these are long-term goals). The indicator of general efficiency in the form of profitability serves current questions about raising the efficiency of production. If, on the basis of the indicator of comparative efficiency, a decision is made concerning capital investments and the correct prices are established for production, the indicator of general efficiency will orient the enterprise toward increasing profitability by virtue of finding and realizing the internal reserves of production which lower the cost of production, but not by virtue of centralized capital investments. And these current questions of raising the efficiency of production are reflected sufficiently fully by the indicator of profitability. However, if one ascribes to it non-characteristic functions of the estimate of the efficiency of capital investments, then disparities arise, which are qualified as inconsistencies between the interests of the national economy and the interests of the cost accounting link and which are derivatives from the natural contradictions between the long-term and current tasks of production.

The utilization, for the same goal, of the indicator of general efficiency side by side with the indicator of comparative efficiency in the consideration of various technical-economic decisions is a peculiar realization of the principle of external supplement and arises from the failure of our understanding to satisfy these two categories, from the desire to unite national economic and cost accounting efficiency in a mechanical manner.

In our opinion, it is necessary to delimit clearly the spheres of application of general and comparative efficiency, and what is more, at the level of enterprises

and individual technical-economic decisions, to specify the utilization of only the indicator of comparative efficiency of capital investments.

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INDUSTRIAL DEVELOPMENT AND PERFORMANCE

MAJOR ECONOMIC ORGANS SURVEYED FOR PERFORMANCE

Moscow EKONOMICHESKAYA GAZETA in Russian No 29, Jul 81 pp 8-9

[Text] The decree of the CPSU Central Committee and the USSR Council of Ministers, "On Improving Planning and Stepping Up the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality" was published two years ago. The EKONOMICHESKAYA GAZETA editorial staff has asked workers of the USSR Gosplan, the USSR Ministry of Finance, the USSR State Committee for Labor and Social Problems and the USSR State Committee for Prices to discuss what has been done to introduce new methods of management and the new planning indicators that are being used for developing the draft of the plan for the Eleventh Five-Year Plan. Published below are their responses to questions of the editorial staff.

Based on Material Balances

[Response by O. D. Gotsiridze, deputy chief of the consolidated division of material balances of the USSR Gosplan]

[Question] The decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979 devoted a great deal of attention to questions of balance between production plans and material and technical resources. How is this problem being solved?

[Answer] The USSR Gosplan has developed material balances for 409 kinds of products, and these are part of the five-year plan for 1981-1985. For 331 kinds of products the balances are drawn up along with the plans for the distribution among the main capital holders for the various years of the five-year plan. Incidentally, only accounting balances were drawn up and approved under the Tenth Five-Year Plan for 234 kinds of products, and distribution plans were not developed. There are from 4 to 30 main capital holders, depending on the kinds of products. On the whole they will consume 75-85 percent of all the resources.

In order to develop long-term economic ties, the capital holders to whom funds will not be allotted under the five-year plan conclude agreements based on the basic year. With long-term economic ties among all capital holders, these agreements will be refined after the approval of the annual plans.

Balances of material resources and plans for their distribution for 2,044 kinds of products are being developed as part of the annual plans.

The USSR Gosplan and its agencies, in turn, are developing balances of material resources and plans for their distribution for the long-range period up to 1990 for 28 of the most important kinds of products, and for the Eleventh Five-Year Plan--balances and distribution plans for 288 kinds of products, and balances and distribution plans are being drawn up for more than 12,000 kinds of products in the annual plans.

The list of products for which material balances and distribution plans will be developed and approved by the ministries and departments of the USSR and the union republics has been revised and made more precise. It embraces more than 2,500 kinds of industrial products.

At the present time the Main Computer Center of the USSR Gosplan is making centralized accounts of the demand for material resources for the production of industrial products. The calculations are being made for 80 ministries and departments of the USSR and also the union republics, and 19 branches and areas in which they are used. These calculations embrace 20 kinds of material resources and are based on a unified list of products and kinds of work which accounts for more than 10,000 positions. Electronic computers are being used to draw up plans for the distribution of material and technical resources. Calculations are being made for more than 1,600 kinds of material and technical resources.

The basis for the development of the balanced plans, both five-year and annual, should be a system of comprehensive progressive technical and economic norms and normatives. The decree of the CPSU Central Committee and the USSR Council of Ministers concerning stepping up work for economy and efficient utilization of all kinds of resources directs us towards this. The USSR Gosplan is establishing as part of the annual and five-year plans assignments for the average reduction of expenditure norms and saving some of the most important kinds of material and technical resources in the cross-section of ministries and departments of the USSR and councils of ministers of union republics. Tasks are being set for an overall proportional expenditure of metal, a reduction of the metal-intensiveness of particular extremely important kinds of items in physical terms, and an increase in the coefficient of the utilization of metal. Planning assignments have also been established for the procurement and processing of secondary resources. Assignments have been envisioned for manufacturing and delivering the necessary technological equipment for these purposes. A section entitled "Utilization of Secondary Raw Materials" has been introduced into the state plan for the economic and social development of the USSR. The plan for 1981 already includes a list of 29 kinds of secondary resources. The USSR Gosplan has created a division for the utilization of secondary resources, and the USSR Gosplan--an administration for supply and interbranch ties concerning secondary resources.

Table 1. Increase in Volume of Deliveries Through Direct Ties (billions of rubles)

1980	42.1
1979	40.3
1975	30.0

Effectiveness of Labor Indicators

[Response by V. K. Moskalenko, deputy chief of the labor division of the USSR Gosplan]

[Question] The new methods of management envision improving the planning of indicators for labor and wages and coordinating them more closely with other planning indicators. How has this work advanced in the branches of industry?

[Answer] The application of the indicator of the normative net output contributes to a more correct determination of labor productivity and normatives for earnings per ruble of output. Improvement of the utilization of resources of the labor force is largely promoted by planned limiting of the number of workers and employees and, in the five-year plan, informing the associations and enterprises of their assignments for reducing the application of manual labor.

In 1981 more than 2,000 enterprises of 25 ministries are applying the indicator "normative net output."

The new policies for planning expenditures on wages in the form of a normative per ruble of output for industrial ministries, associations and enterprises will play a large role in the system of measures that are taken. In the plan for 1980 such normatives were approved for 9 ministries, and in the plan for 1981--for 19.

The new policy makes it possible to avoid situations in which funds unjustifiably exceed earnings and, in the process of fulfilling the plans, to improve the ratio between their growth and the increase in labor productivity.

Moreover in many cases money is saved from the wage fund as compared to the established normative, and this savings, according to provisions now in effect, is transferred at the end of the year into the material incentive fund. Thus, according to the report for January-April 1981, the actual expenditures on wages per one ruble of output turned out to be less than those planned for the associations and enterprises of the Ministry of the Electrical Equipment Industry, the Ministry of Chemical and Petroleum Machine Building, the Ministry of the Machine Tool and Tool Building Industry, the Ministry of Heavy and Transport Machine Building, and the Ministry of Construction, Road and Municipal Machine Building. Especially good results in this area were achieved by enterprises of the Ministry of Machine Building for Animal Husbandry and Fodder Production and the Ministry of Machine Building for Light and the Food Industry and Household Appliances. There expenditures were 2.2-2.7 less than planned.

More economical expenditure of funds for wages has not kept the collectives of the enterprises of the ministries from successfully coping with planning assignments for increasing the volumes of production and increasing labor productivity. This was undoubtedly affected in a positive way by the further expansion of the rights of the associations and enterprises to provide material incentives for workers with a fewer number of personnel, which was envisioned by the decree concerning improvement of the economic mechanism.

Still it should be noted that in many cases these rights are not adequately utilized. The managers of certain enterprises still prefer to maintain a "reserve" labor force and do not introduce the Shchekino method which has now become the overall norm for management.

Experience shows that the normatives established for labor can play their positive role if they remain stable throughout the entire planning period. Unfortunately, this most important requirement is not always met. Changes are still being made in the established normatives without sufficient justification, and frequently because excessive numbers of personnel are retained or because of considerable amounts of overtime work and slipshod work. The immediate task of ministries and industrial associations is to provide for stability of the normatives that are established.

Reliable Guarantee for Agreements

[Response by V. V. Il'in, chief of the subdivision of the division for improving planning and economic stimulation of the USSR Gosplan]

[Question] Among the measures for improving the economic mechanism, an important role is assigned to increasing responsibility for the fulfillment of contractual commitments between suppliers and consumers. What is being done in this area?

[Answer] Now the evaluation of the results of the economic activity of production associations (enterprises) in industry and also their economic stimulation are calculated on the basis of the fulfillment of assignments and commitments for deliveries of products. This has considerably raised the level of the fulfillment of delivery plans.

An effective policy for providing incentives to fulfill delivery plans also plays a positive role. An analysis of the work in industry in 1979-1981 shows that the number of enterprises that have failed to completely fulfill agreements has decreased markedly.

But significant shortcomings have also been revealed. Certain ministries have established preferential "limits" for the failure to fulfill assignments for deliveries for enterprises under their jurisdiction, and management workers are given incentives on the basis of them. This pertains primarily to enterprises of the industries of the chemical and petrochemical and also heavy and transport machine building and the electrical equipment industry.

An inspection conducted at enterprises of the Moldavian SSR Ministry of Light Industry established that the maximum percentage points of failure to fulfill the plan for consumer goods were established for enterprises of the branch without sufficient justification. The USSR Ministry of Light Industry has done a certain amount of work to stiffen the maximum percentage points, but it must be continued. During 1980 enterprises of light industry produced almost 2.5 billion rubles' worth of goods less than were envisioned by agreements and orders. And this figure was covered up by the output of items that were not ordered. The plan for the overall volume of sales by enterprises of the branch was fulfilled by 101.4 percent.

Enterprises of the Ministry of the Electrical Equipment Industry fulfilled the plan for the volume of product sales by 101.6 percent, but they failed to produce 3.9 percent of the products that were ordered and agreed upon.

Still it is necessary to note that many industrial enterprises, as a rule, fulfill the consumers' orders within the planned time periods. They include the Moscow ATE-1 plants, the second watch plant, the Leningrad Svetlana association and optical-mechanical and tractor building enterprises of Minsk and Vladimir. The Moscow ZIL association receives practically no complaints from its consumers.

In order to further increase discipline for deliveries, the USSR Gosplan, the USSR Gossnab, the USSR Ministry of Finance, the USSR State Committee for Labor and Social Problems, the USSR Central Statistical Administration and the AUCCTU, taking accumulated experience into account, is envisioning the introduction of additional measures for stiffening the policy for the formation of the material incentive funds and the payment of bonuses when assignments and commitments are not fulfilled. Thus the ministries and departments will be given the right to establish for the enterprises the maximum percentage point (degree) of failure to fulfill assignments and commitments for the delivery of products in amounts that, as a rule, do not exceed 2 percent.

With complete or partial compensation during subsequent quarters for the failure to deliver products during the preceding period, up to 50 percent of the sum by which the incentive fund was reduced because of the failure to deliver products in time in keeping with agreements (orders) that were concluded can be returned to the material incentive fund. At the present time, as we know, the entire sum is being returned. This will contribute to strengthening delivery discipline.

Finances and Efficiency

[Response by V. P. Ignatushkin, chief of the division for new methods of planning and economic stimulation of the USSR Ministry of Finance]

[Question] What has been done to step up the role of financial planning?

[Answer] During two years normative documents have been prepared and adopted which serve as the basis for subsequent restructuring of financial relations in the country.

Industrial and construction ministries have done a good deal of work to draw up balances of incomes and outlays for 1981-1985 which have been submitted to the USSR Ministry of Finance with the necessary calculations and justifications.

At the present time the normative method of distributing profit is being applied in 7 machine building ministries (the Ministry of Heavy and Transport Machine Building, the Ministry of Construction, Road and Municipal Machine Building, the Ministry of Agricultural Machine Building, the Ministry of the Electrical Equipment Industry, the Ministry of Instrument Making, Automation Equipment and Control System, the Ministry of Machine Building for Animal Husbandry and Fodder Production and the Ministry of Power Machine Building), and also in construction--the Ministry of Industrial Construction and the Ministry of Construction and Installation of Special

Equipment of the Belorussian SSR, and the Ukrainian SSR Ministry of Heavy Construction. This year the ministries of the meat and dairy industry of the Uzbek SSR, the Azerbaijan SSR, the Estonian SSR and a number of other branches are to operate under new conditions.

The process of restructuring the system of distribution of profit is taking place in mid-level and local administrative units. Thus all unionwide industrial associations and more than 90 percent of the enterprises in the Ministry of Agricultural Machine Building are operating under the new conditions.

The changeover to the autonomous financing system of organizing work for creating, assimilating and introducing new technical equipment on the basis of order-contracts (agreements) has been practically completed.

Financial levers are having an ever greater influence on increasing the output of products with the Emblem of Quality. At the same time an economic barrier has been created for the output of products that are to be removed from production.

In the complex of measures for strengthening the role and significance of finances and financial relations, an important position has been allotted to the development of economically justified normatives for circulating capital. This exceptionally complicated work is now being done in all ministries and departments.

Incentive Funds

[Response by V. A. Rzheshhevskiy, chief of a subdivision of the division for improving planning and economic stimulation of the USSR Gosplan]

[Question] Which measures have been taken for further improvement of the system for the formation and utilization of incentive funds?

[Answer] The USSR Gosplan, the USSR Ministry of Finance, the USSR State Committee for Labor and Social Problems and AUCCTU have prepared and approved the "main provisions for the formation and expenditure of incentive funds in 1981-1985." Taking accumulated experience into account, they have developed and sent for improvement final qualitative indicators of the operation of associations and enterprises.

The normatives for calculation are applied for determining the amounts of incentive funds in the stage of development of the five-year plan on the basis of control figures.

The USSR Gosplan has notified the USSR ministries and departments, as part of the control figures, of the main indicators and normatives for determining the amounts of incentive funds.

The Main Directions, which were approved by the 26th CPSU Congress, set the task of starting a movement toward the development and fulfillment of counterplans. In May 1981 provisions were approved concerning the policy for the development of counterplans for the Eleventh Five-Year Plan and the incentives for their fulfillment. When the ministries, associations and enterprises adopt and fulfill counterplans that exceed the assignments of the five-year plan, the deductions into the

incentive funds for this are made at increased normatives, and, when the five-year plan is not fulfilled, at reduced normatives. This policy gives the advantage to collectives that fulfill and overfulfill the assignments of the five-year plan.

Now the evaluation of the results of the economic activity of industrial associations and enterprises and also their economic stimulation are carried out primarily on the basis of the final qualitative indicators of their operation.

One also takes into account the peculiarities of the work of individual branches of industry. Thus in the petroleum extracting, coal and several other branches of industry, incentive funds depend on the rise of the indicators in physical terms.

In branches of light, the food, the meat and dairy and the fishing industry it is permitted to use as the fund forming indicator the increase in production in value terms.

Enterprises of all branches of industry, when determining the amounts of the incentive funds, take into account the fulfillment of assignments for the delivery of products. With complete fulfillment of assignments and commitments for deliveries, the material incentive funds of the associations (enterprises) are increased by an additional 10 percent. This is a new incentive measure.

According to norms in effect under the Tenth Five-Year Plan, the enterprises must use no less than 60 percent of this fund for housing construction and also the construction of other cultural and domestic facilities. The new policy for the utilization of incentive funds precludes such regulation. Now the enterprises--their administrations in conjunction with their trade-union committees--resolve independently the problem of the amounts of money that are taken from this fund for one purpose or another.

The higher organization is obligated to include in the plan for capital investments and also to provide in the financial plan for the utilization of money from this fund for housing and other construction in amounts earmarked in the drafts of the plans by the enterprises themselves.

The fund for the development of production plays a significant role in increasing efficiency. The ministries and departments have done a significant amount of work to realize the points envisioned by the decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979 concerning increasing the role of this fund in the technical rearmament of existing enterprises. Normatives for the formation and the overall amounts of the fund for the development of production were promptly approved by the ministries and departments of the USSR, with the participation of the trade unions, for the plan for 1981. In 1981 this fund will be used directly for technical rearmament of production and, as a rule, it will not be diverted for other purposes.

Still, the policy for the planning and utilization for the fund for the development of production is not yet being fully implemented. Thus a considerable proportion of the enterprises have developed plans for technical rearmament without singling out specific measures that are to be carried out with money from the fund for the

development of production. At the Yaroslav plant for fuel equipment of the Dizel'-apparatura production association of the Ministry of the Automotive Industry, according to the plan for technical rearmament for 1981 that was approved by the higher organization, Soyuzavtoagregat, expenditures on technical rearmament should amount to 2.0 million rubles, including 0.4 million rubles from the fund for the development of production. But the estimate of the expenditure of the fund for development of production was not developed.

Table 2. Material Incentive Funds in Industry (used, millions of rubles)

1975	5,663
1979	6,343
1980	6,706

There appeared a need to augment a number of previously adopted instructions and provisions and to make them more precise. The USSR Gosplan and the MVK under the USSR Gosplan has taken a number of measures to solve these problems. They have outlined a policy for calculating stable normatives for the formation of the fund for the development of production in the various years of the Eleventh Five-Year Plan, which establishes a dependency between an increase in this fund and the amount of increase in capital investments for technical rearmament of production.

The ministries and industrial associations are allowed to differentiate in 1982-1985 the normatives for the formation of the fund for the development of individual enterprises, taking into account the obsolescence of their production capital, the need to modernize it, and also depending on the effectiveness of measures for technical rearmament of industry.

The decree of the CPSU Central Committee and the USSR Council of Ministers for economizing on and efficiently utilizing resources strengthens the role of funds for stimulating the economy and efficiently utilizing raw material, fuel, energy and other materials.

System of Norms and Normatives

[Response by G. M. Pokarayev, deputy chief of the division for norms and normatives of the USSR Gosplan]

[Question] The decree of the CPSU Central Committee and the USSR Council of Ministers of 12 July 1979 set the task of raising to a qualitatively new level the content of planning, and particularly on the basis of the introduction of a system of scientifically substantiated technical and economic norms and normatives. What is being done in this area?

[Answer] The USSR Gosplan has approved the system of progressive technical and economic norms and normatives that was prepared with the participation of the industries and departments and has earmarked measures for its introduction.

The system determines the composition of norms and normatives of expenditures (savings) on labor, raw materials, processed materials, and fuel and energy resources. Moreover it contains normatives for the utilization of production capacities and

proportional capital expenditures as well as the optimal composition of equipment and demand for cable items. The system determines the policy for further improvement of methodological foundations and the provision of methods for norm setting and exercising stricter control over norms. On its basis conditions are created for comprehensive analysis of the savings on various kinds of resources.

Many ministries, particularly the USSR Ministry of Construction, Road and Municipal Machine Building, the Ministry of the Petroleum Industry and the Ministry of Civil Aviation, have developed comprehensive plans for work to improve norm setting in 1981-1985. Head subdivisions have been earmarked which are responsible for organizing the norm setting for resources. The experience of ministries that have created special commissions to be in charge of this work is worthy of attention. A number of branches have essentially manned the norm setting staff with qualified personnel.

Following the assignment of the USSR Gosplan, the Scientific Research Institute of Planning and Norm Setting under the USSR Gosplan has considerably expanded the range of its research on norm setting. This will make it possible in the near future to facilitate the work of branch scientific research institutes which are experiencing a shortage of standard documents concerning the number of kinds of norms and normatives.

Still, not all ministries and territorial planning agencies are devoting the proper attention to these issues.

Special attention should be given to the organization of the work of norm setting services of enterprises and associations. These subdivisions must be given assistance by staffing them with highly qualified personnel. The fact that such services do not exist at many enterprises is quite inadmissible.

The comprehensive nature of the tasks that have been set require that the formation of a normative base for enterprises and associations be under the leadership of their director or his deputy for economic problems. Public bureaus for economic analysis and technical norm setting as well as production innovators must participate actively in this work.

The USSR Gosplan and the USSR State Committee for Labor and Social Problems in conjunction with the ministries and departments have now begun to develop a normative for the complete factory-plant labor-intensiveness of each unit of output so that in the future they can change over to substantiating the plan for labor on the basis of this indicator.

It should be emphasized that the group of norms and normatives for material resources has been augmented by a number of new indicators: the assignment for the average reduction of the overall proportional expenditure of metal and the coefficient of the utilization of metal, which make it possible to provide for a comprehensive approach to planning the savings on metal products. These measures will make it possible for labor collectives to fulfill more successfully the tasks earmarked by the decree of the CPSU Central Committee and the USSR Council of Ministers concerning economizing on resources.

Wholesale Prices Developed

[Response by L. A. Aybazov, deputy chairman of the USSR State Committee for Prices]

[Question] Beginning in January 1982 new wholesale prices and tariffs will be introduced in industry. What has been done to step up the role of prices in strengthening autonomous financing and increasing production efficiency?

[Answer] The overall revision of wholesale prices and tariffs in industry has already been completed. A total of 2,020 new price lists have been developed. They have been published in mass editions and submitted to the ministries, departments, associations, enterprises and organizations.

As a result of the revision, wholesale prices and tariffs have been brought into line with modern conditions for the production and sale of products and the requirements of the economic mechanism, and the necessary conditions are being created for the development and strengthening of autonomous financing. Thus losses have been eliminated in the extraction of coal, timber processing and the production of thermal energy. Thus unjustifiably high profitability in certain branches and groups of products has been eliminated, particularly in the electronic, radio technical, instrument building and chemical industries.

Prices play a stronger role in economizing on material resources, accelerating scientific and technical progress and improving product quality. In order to increase the motivation of the associations and enterprises to produce less metal-intensive items, the profit included in the new prices is calculated according to normatives of profitability that have been established in terms of the production cost minus material expenditures.

The ratio of prices for interchangeable kinds of products and their territorial distribution have been improved in the new price lists. For example, wholesale prices for plastics and synthetic resins have reduced, which makes it possible for them to be used more widely to replace nonferrous metals.

Special attention has been devoted to the way prices stimulate the assimilation of the riches of Siberia and the Far East. For instance, in order to create economic conditions for the accelerated development of the Kansk-Achinsk and Ekibastuz basins, the new prices envision a higher level of profitability (2.4-2.6-fold) than the one that prevails in the coal branch as a whole.

The new wholesale prices provide for increased profitability for progressive kinds of rolled metal and other highly effective metallurgical products--light section rolled metal and converter steel.

Along with the improvement of wholesale prices for industrial products, normatives of net output (NChP) have been developed and approved. They are included in the new price lists or appended to them. Beginning next year 33 ministries, including all machine building ministries, will change over to the use of the NChP indicator in industry.

I should like to emphasize especially that the revision of wholesale prices for industrial products was carried out without any change in state retail prices.

Effect of Brigade Forms

[Response by M. P. Glyantsev, chief of the division for organization, norm setting and productivity of labor of the USSR State Committee for Labor and Social Problems]

[Question] The decree of the CPSU Central Committee and the USSR Council of Ministers concerning improving the economic mechanism has set the task of making the brigade form of organization and stimulation of labor the main one. How is this task being carried out?

[Answer] About 1.2 million brigades have now been created and are working at industrial enterprises. They join together almost 49 percent of the workers.

Last year the experience of the leading collectives was extensively studied at an all-union seminar of workers of machine building ministries in Kaluga, which was conducted on the basis of the Kaluga turbine plant, and at conferences of brigade leaders of industrial enterprises in areas of the Urals. At the Kaluga turbine plant, for example, where the brigade form was developed long ago and very efficiently, labor productivity under the Tenth Five-Year Plan increased by 56 percent, the coefficient of shift work of equipment increased from 1.24 to 1.55, and labor turnover decreased by more than half.

On the basis of generalization of advanced practice, the USSR State Committee for Labor and Social Problems and the AUCCTU prepared and approved provisions and recommendations. Beginning in 1981 the development of brigade organization and stimulation of labor was placed on a planning basis and is included in the plans for scientific organization of labor at enterprises, associations and branch ministries for the various years and the five-year plan as a whole.

Beginning on 1 January 1982 statistical accountability will be mandatory.

In keeping with the plans for scientific organization of labor, in 1981 all enterprises of machine building and ministries are to provide for a labor savings of 28,000 people as a result of the introduction of brigade organization.

Table 3. Proportion of Workers Joined Into Brigades in Industry (Percentages)

1980	48.6
1985	
(plan)	60-65

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CSO: 1820/243

REGIONAL DEVELOPMENT

GEORGIAN SSR OFFICIAL CITES ECONOMIC ACHIEVEMENTS

Moscow PLANOVYE KHOZYAYSTVO in Russian No 7, Jul 81 pp 3-13

[Article by Z. Pataridze, chairman of Council of Ministers for Georgian SSR: "The Economy of Soviet Georgia: Achievements and Prospects"]

[Text] This year the Communist Party of Georgia celebrates its 60th anniversary, with the General Secretary of the CC CPSU L.I. Brezhnev having assigned a high value to its work during the 26th party congress. Still another jubilee is being celebrated -- the 60th anniversary of the establishment of Soviet rule in Georgia. During these years the Georgian SSR achieved great successes in the area of economic and social development and it has been transformed from a backward and outlying district of Czarist Russia into a republic having large-scale industry, a multi-branch agricultural system and an advanced science and culture.

In the inter-republic division of labor, the republic's industry is characterized by such important branches as the mining of manganese ore and the production of ferro-alloys, the manufacturing of steel pipe of a petroleum assortment and certain types of rolled steel, the production of technological equipment for specialized sub-branches of the food industry, electric locomotives and electrical lathes, metal-cutting units, vibration machines and welding units, the manufacturing of electrical engineering items and instruments, the mining and processing of mining and chemical raw materials and non-metallic minerals (barite, andesite, gumbrin, askanite) and the production of hydrofoil cutters, paint pigments, synthetic materials, essential oils, fruit and vegetable products and wine and tobacco items.

Substantial quantitative and qualitative improvements have taken place in agriculture, which has undergone a transformation based upon Lenin's cooperative plan. During the 1921-1980 period, the production volume for grain crops increased by more than twofold, grapes -- by a factor of 13, meat (in dressed weight) -- by threefold and milk -- by almost threefold. Completely new branches of agriculture, based upon the effective use of the republic's unique natural-soil and climatic conditions, have made an appearance. Today the Georgian SSR furnishes 90-100 percent of the all-union production of subtropical farming products (tea, citrus fruits and so forth). Fruit production, tobacco cultivation and other branches of agriculture have undergone industrial development. The social aspect and appearance of the Georgian rural areas have changed radically.

During the years of Soviet rule, an extensive transport network was created throughout the republic. It includes railroad, motor vehicle, marine, aviation and

pipeline transport and also such progressive types as suspension cableways, container-pipeline and pneumatic transport. Other branches of material production and its infrastructure also underwent considerable development. During these 60 years on the whole, tremendous resources -- more than 28 billion rubles worth -- were invested in the development of the logistical base for the national economy of the Georgian SSR.

At the same time, it bears mentioning that in addition to the achievements realized in the area of economic and social growth, certain shortcomings were also observed. In the early 1970's, the Georgian SSR had fallen behind in terms of a number of most important indicators of economic and social development. Large-scale miscalculations and negative phenomena were also observed in the management of the national economy, as well as a weakening in the organizational and political-ideological work carried out during the preceding period.

The adoption in February 1972 of the CC CPSU decree entitled "Organizational and Political Work of the Tbilisi Municipal Committee of the Communist Party of Georgia in Carrying Out the Decisions of the 24th CPSU Congress" became a turning point in the life of the republic. Subsequently, a number of measures were implemented aimed at accelerating the economic and social development of the Georgian SSR.

The basic directions to be followed for achieving economic growth for the republic over an extended period were defined. In 1976 the party organization of Georgia established the principal goal for the long-term future -- overcoming the degree to which the Georgian SSR had fallen behind the average union level for the production of the total social product and the per capita national income. Subsequently, the CC CPSU and the Soviet Government adopted a number of additional and important measures for accelerating the development of the branches of the national economy and industry of the Georgian SSR and the economy and culture of the Abkhazskaya ASSR, which provided the foundation for the great reforms in the mentioned branches and regions.

Since the second half of the Ninth Five-Year Plan, a trend has been noted towards considerable growth in the rates for economic and social development, towards improvements in the qualitative indicators for management and towards dynamic and proportional growth for all branches of material production and the sphere of services. During the past two five-year plans, the republic has surpassed to a considerable degree the planned scales and rates of development for social production. In 1980 the gross social product for the republic amounted to approximately 16 billion rubles, or greater by a factor of 1.9 than the figure for 1970. The national income of the Georgian SSR also increased by a factor of 1.9 during the ten year period (1970-1980). During the last year of the Tenth Five-Year Plan, it amounted to 7.2 billion rubles.

In addition to growth in the scales of public production, substantial improvements also took place in the structure of the economy. The proportion of industrial national economic branches increased. In particular, the proportion of industry in the republic's national income increased to 52 percent in 1980, compared to 48 percent in 1975 and 44 percent in 1970. In 1980 the overall volume of industrial production exceeded the 1970 level by almost twofold. The growth (amounting to 141 percent) which the Georgian SSR achieved in industrial production during the 1976-1980 period (as was established in the directives of the 25th CPSU Congress), despite

difficulties which arose in logistical supply, was the result of work carried out in all areas aimed at uncovering internal reserves, especially in the branches which process the local agricultural raw materials. Thus, in the case of over-fulfillment by 700 million rubles of the task of the Tenth Five-Year Plan for industrial output volume, 383 million rubles (or 55 percent) were obtained from the processing of above-plan agricultural output. This was promoted by a sharp increase in the production and procurements of the more important agricultural products. It was not until the final year of the last five-year plan that a record crop of tea and grapes was harvested in Georgia -- 520,000 and 991,000 tons respectively. Considerable achievements were also realized in other branches of agriculture. During the Tenth Five-Year Plan on the whole, the average annual volume of gross agricultural output increased by 34 percent instead of 29 percent as called for in the five-year plan.

The foundation for the development of public production is that of strengthening and expanding the logistical base of the republic's national economy. The overall volume of capital investments during the 1971-1980 period amounted to 12.2 billion rubles, including 7.2 billion rubles during the Tenth Five-Year Plan. During the 10 year period, 11.7 billion rubles worth of fixed capital were placed in operation, with 7.2 billion rubles of this amount being employed during the 1976-1980 period. The following facilities were placed in operation in Georgia during the 1970's: the Madnevl'skiy Mining-Concentrating Combine, the Zugdidi Porcelain Plant, five units of the Ingurskaya GES, a cascade of the Vartsikhskaya GES, a new complex for ammonia production at the Rustava Chemical Plant, ferroalloy furnaces at the Zestafoni Ferroalloy Plant, the Gachiani-Batumi oil pipeline, many enterprises of the food industry and a number of other branches. Numerous projects of an agricultural nature were built and irrigation and drainage systems were placed in operation on an area of 10,000 hectares.

These achievements became possible owing to the fact that the republic has consistently followed a policy of achieving further intensification and raising the efficiency of public production.

Over the past 10 years, the productivity of public labor has been raised by more than a factor of 1.8, including during the 1976-1980 period -- by 42 percent, labor productivity in industry -- by 60 and in agriculture -- by 41 percent. During the 1971-1980 period, improved labor productivity throughout the republic made it possible to obtain an increase in national income of approximately 85 percent, an increase of more than 84 percent in industrial production and the entire increase in agricultural output.

Noticeable improvements have been realized in the indicators for utilization of the means of production. During the Tenth Five-Year Plan, the capital-output ratio in the national economy increased by 1 percent and this made it possible to cover the reduction of 1.9 percent which took place in this indicator during the Ninth Five-Year Plan. A reduction also took place in the materials intensiveness of the total public product, as a result of which an overall increase of 16 percent in the national income was realized during the 10 years.

Unceasing attention was given to improving the quality of the products being produced, especially during the Tenth Five-Year Plan. By 1980, the number of products upon which the state Badge of Quality had been conferred reached 2,500 and during the five year period the proportion of high quality products reached 21 percent compared to only 2.3 percent in 1975.

The consistent implementation of the program for achieving scientific-technical progress has served as the principal source for raising production efficiency. During the 1976-1980 period, the number of measures aimed at creating and introducing new items of equipment amounted to 24,450, exceeding by 33 percent the same indicator for the Ninth Five-Year Plan. A considerable increase took place in the number of completely mechanized and automated departments and sectors.

The accelerated growth in the scales and efficiency of public production created the foundation for the consistent implementation of the program, planned in conformity with the decisions handed down during the 24th and 25th CPSU Congresses, for further improving the material welfare and cultural level of the Soviet people. During the 10 year period, the volume of national income utilized increased by 1.7 percent and real per capita income -- by 1.6 percent. During the years of the Tenth Five-Year Plan alone, the wages of manual and office workers increased by 22 percent and the payments to kolkhoz members -- by a factor of more than 1.5. The payments and privileges extended to the population from the general consumption fund increased during the 10 year period by a factor of 1.8, including during the 1976-1980 period -- by 30 percent.

Trade and domestic services for the population developed rapidly. Maximum attention was given to housing construction. Since 1973, the republic has systematically been fulfilling its plans for placing housing units in operation. During the 1971-1980 period, 17 million square meters of housing space were built, or 21 percent of the republic's total amount of available housing.

Other substantial improvements in the social sphere took place in the republic during the 1970's. The most important achievement in this sphere was the additional attraction into the public economy of more than 218,000 individuals during the years of the Tenth Five-Year Plan alone. This made it possible to raise the level of employment of labor resources from 83 percent in 1975 to 86 percent in 1980. When one considers that improved labor productivity resulted in the release of 1.222 million workers from public production during the 1971-1980 period, then the mentioned growth in the level of employment can only be viewed as a success of considerable proportion in this work.

Measures were implemented throughout the republic in connection with improving the placement of the productive forces. Special importance was attached to the consistent fulfillment of the decisions handed down during the 25th CPSU Congress, as they affected the Georgian SSR. As one of the more important socio-economic tasks, plans were formulated for the creation of branches and production efforts at large-scale enterprises, in small and medium size cities and also in mountainous and piedmont regions, where there were still considerable contingents of unemployed labor resources available. Thirteen such branches were created during the Tenth Five-Year Plan alone and at the present time there are 44 of them in the republic. Thus, in the late 1970's, approval was given for those progressive trends and improvements in the republic's economy which, as mentioned above, came into being during the second half of the Ninth Five-Year Plan, at which time the Central Committee of the Communist Party of Georgia developed its program for achieving a radical turning point in party management of the national economy.

In the final analysis, the mentioned trends are helping to solve the long-term task of bringing the Georgian SSR closer to the all-union level in terms of the overall

indicators for economic and social development. During the 1973-1980 period, that is, the period which followed the adoption of the CC CPSU decree concerning the work of the Tbilisi Municipal Committee, the backwardness of the republic with regard to the all-union level for the production of per capita national income decreased from 30 to 8.9 percent, for the production of industrial products -- by 13 points, gross agricultural output -- by 26 and volume of retail commodity turnover -- by 8 points. The role played by the Georgian SSR in the country's unified national economic complex increased accordingly. These achievements were valued very highly by the CC CPSU and the Soviet Government. For the last 8 years in a row, the republic has been declared the winner of the all-union socialist competition and has been awarded the challenge Red Banner of the CC CPSU, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee.

The General Secretary of the CC CPSU and Chairman of the Presidium of the USSR Supreme Soviet warmly congratulated the workers in the Georgian SSR and its party organization for having fulfilled, by 20 November 1980, the plan for principal indicators of the Tenth Five-Year Plan.

At the same time, the achievements realized by the Georgian SSR and the contribution it makes towards solving the economic and social tasks confronting the country could be considerably greater if greater use were made of the republic's production, scientific-technical and labor potential, as mentioned in the speech delivered before the 26th CPSU Congress by Candidate Member of the Politburo of the CC CPSU and 1st Secretary of the Central Committee of the Communist Party of Georgia E.A. Shevardnadze.

The level of industrial development for the Georgian SSR is still inadequate. In particular, the level of industrial output per resident in the republic at the present time is 25 percent less than the average for the USSR as a whole. The republic's industry constitutes a considerably smaller proportion of its national economic structure than does the corresponding branch with regard to the country's economy. For example, in 1978 industry for the USSR created 56 percent of the national income and in the Georgian SSR -- 50 percent. In 1979, the value of the fixed productive capital in USSR industry was on the whole 48 percent and for Georgian industry -- 41 percent, and the proportion of industrial-production personnel compared to the overall number of manual and office workers -- 33 and 22 percent respectively.

At the same time, it bears mentioning that despite a certain increase in the contribution by the Georgian SSR to the country's overall volume of industrial output, its proportion in terms of a number of important types of products has recently fallen. This applies in particular to electric power, rolled ferrous metals, steel piping, mineral fertilizers, metal cutting units, slate, brick and cotton fabrics. This situation arose as a result of the fact that a number of union industrial ministries failed to employ the capital investments called for or the resources required for ensuring more complete workloads for the existing enterprises. Thus, during the 1976-1980 period, only 58 million rubles worth of capital investments, or 20 percent less than the volumes called for in the five-year plan, were allocated for enterprises of Minkhimprom [Ministry of the Chemical Industry] located on the territory of the Georgian SSR; for enterprises of Minstankoprom -- 10 million rubles or 23 percent; Mintransstroy [USSR Ministry of Transport

Construction] -- 16 million rubles or 44 percent; USSR Minvodkhoz [Ministry of Land Reclamation and Water Resources] -- 15 million rubles or 32 percent and so forth. As a result, a number of large-scale capabilities were either not placed in operation in a timely manner or their introduction into operations was postponed until after the five-year plan had expired.

In addition, quite often the fuel-energy and material resources called for in the plans are not made available and this has resulted in considerable underexploitation of the production capabilities. Thus, according to incomplete data, during the five-year plan the republic failed to receive more than 141,000 tons of rolled ferrous metal, 1.852 million cubic meters of round timber and so forth.

It is obvious that the difficulties created in some of the country's basic branches have definitely affected the work of the republic's enterprises. However, we are of the opinion that there is still another important factor at work here -- the use of a specialized-branch and, quite often, a departmental approach on the part of a number of union ministries. Quite often the latter do not take into account the requirements for the all-round development of productive forces on a territory or they hand down solutions for problems of considerable economic-political importance to the republic which were not coordinated in advance with the local organs. This is borne out by the following facts. In composing its annual plans, the republic established production volumes for the enterprises of union ministries and departments at the level for the tasks of the Tenth Five-Year Plan. However, in presenting the planned tasks to the enterprises and associations of the ministry, the industrial output volumes previously agreed upon and included in the computations of USSR Gosplan were reduced considerably. This forced the republic, in the interest of achieving the established rates for production growth, to search for reserves for increasing output in the union-republic and republic industry and it created excessive tension in the work of the corresponding branches. The situation was further aggravated by the fact that the planned tasks given to the enterprises by the union ministries were also corrected with the course of a year's time. Thus, in 1976, the original annual plan for industry of union subordination was reduced by 21 million rubles, in 1977 -- by 19 million rubles, in 1978 -- by 49 million rubles and in 1979 -- by 49.4 million rubles. In 1980 the USSR ministries reduced the original plan for their subordinate organizations, located on the territory of the Georgian SSR, by more than 54 million rubles.

As a result of such practice during the fulfillment by the republic on the whole of its five-year plan for the rates of growth in industrial production, the rate of growth for industry of union subordination during the 1976-1980 period amounted to 31.4 percent instead of 48 percent as called for in the five-year plan. In particular, the five-year task was underfulfilled to a considerable degree by enterprises of USSR Minenergo [Ministry of Power and Electrification], USSR Minchermet [Ministry of Ferrous Metallurgy], USSR Mintsvetmet [Ministry of Non-Ferrous Metallurgy], Minkhimprom, Minelektrotekhprom [Ministry of the Electrical Equipment Industry] and Minstankoprom [Ministry of the Machine Tool and Tool Building Industry], despite the fulfillment by a majority of the mentioned union ministries of the country's five-year task on the whole.

The facts cited underscore the need for raising the responsibility of the branch ministries for the fulfillment of the plans. Towards this end, a system should be

introduced for establishing the planned tasks according to the most important indicators and for evaluating their fulfillment by ministries and from a territorial standpoint (by union republics and economic regions).

Other shortcomings appeared during the Tenth Five-Year Plan. For example, the Trans-Caucasus Railroad -- the republic's principal transport artery -- is experiencing considerable operational tension and this is hindering normal and stable economic contacts between the republic and other regions and oblasts of the Soviet Union. As a result, many trains systematically lie idle along the approaches to the Caucasus, trains which the railroads are unable to move in a timely manner. Individual shortcomings were also uncovered in other areas of production and economic activity.

In the Basic Directions for the Economic and Social Development of the USSR During the 1981-1985 Period and for the Period Up To 1990, great prospects are envisioned for developing the national economy of the Georgian SSR. It is anticipated that the economy of the Georgian SSR will enter a qualitatively new stage in its development, one characterized by the creation of considerable production and scientific-technical potential, by increasing scales and a high effectiveness for public production, by constant growth in the welfare of the population and by greater participation by the republic in the all-union division of labor.

The plans for the next decade call mainly for an expansion in the scales of public production. Computations have shown that if dynamic and proportional growth is achieved in all branches of material production and if more intense and improved use is made of their production-technical base and natural and labor resources during the period up to 1990, a considerable increase will take place in the volume of overall social product and national income produced. Large-scale social production will be achieved in the republic mainly by means of steady growth in those branches of industry which are bringing about further technical progress and all-round development of the national economy and also through the creation of a reliable electric power base, large-scale machine building and chemical complexes and highly developed branches engaged in the production of ferrous and non-ferrous metals, construction materials and consumer goods.

The Eleventh Five-Year Plan calls for an increase of 30-33 percent in the volume of industrial production in the Georgian SSR. Moreover, priority development will be given to certain non-metal intensive branches of machine building, those requiring the use of highly skilled labor and the introduction of scientific developments, such as electrical engineering, the electronic and radio engineering industry and instrument making. Great tasks confront the chemical industry, electrical engineering and other branches of heavy industry.

For the long term future, priority importance is being attached to the task of creating a reliable electrical engineering base for the national economy. The Basic Directions call for a number of important measures for developing this branch in the Georgian SSR. In particular, during the Eleventh Five-Year Plan the production of electric power must be increased by a factor of 1.2. However, for a stable power supply and the republic's rapidly developing economy, this is insufficient even for the immediate future. By the end of the five-year period, there will be an electric power deficit of up to 2.3 billion kilowatt hours in the republic's power balance

(with this balance including a large proportion of seasonal hydroelectric power stations). It will not be possible to cover this deficit by means of electric power obtained from neighboring power systems in the future, owing to the limitation on growth in the corresponding capabilities and the great scales for increasing the internal consumption of electric power. The acute nature of this problem was borne out in the speeches delivered by the delegates to the 26th CPSU Congress from the Trans-Caucasus republics. It is believed that the proposal advanced by them for creating new power engineering capabilities should be supported in every possible way. Towards this end, the construction of a large-scale basic electric power station in the republic should be accelerated, the planning should be completed in the near future and preliminary work should commence during this current five-year plan.

In addition to the great scales of power engineering construction in the Georgian SSR, a number of measures will be implemented in the near future in connection with the rational use of the available supplies of oil and coal. At the same time, in view of the limited nature of the local supplies of the mentioned types of mineral fuel and also of the possibility of importing them into the republic by rail, in order to alleviate the tense nature of the fuel and energy balance of the Georgian SSR and other Trans-Caucasus republics, great importance is attached to accelerating the erection of a new gas line connecting them to the gas procurement regions of the country.

One of the basic economic and social tasks remaining to be solved in the near future in the republic's national economy is that of achieving a substantial increase in the proportion of machine building output in the overall volume of industrial production. The Eleventh Five-Year Plan calls for high goals to be achieved in this regard. For example, the Basic Directions called for an increase in the volume of machine building output in the republic of 1.6 times, compared to only 1.4 times for the country on the whole. The achieving of such a high rate of increase requires substantial improvement in production efficiency throughout the branch. First of all, it will be necessary to improve the use of existing production capabilities and also to ensure the fulfillment of the program for building large-scale machine building enterprises in the Georgian SSR. The machine building enterprises have considerable reserves at their disposal for accomplishing this, reserves which still are not being utilized fully. Thus, mainly in connection with the limited nature of the material resources and also the shortcomings in labor organization and production, the degree of use of their production capabilities at enterprises of Mingazprom [Ministry of the Gas Industry], located on the territory of the Georgian SSR, was 77 percent, Mintyazhmash [USSR Ministry of Heavy Machinery Manufacture] -- 84, Minpribor [Ministry of Instrument Making, Automation Equipment and Control Systems] -- 88, Minsel'khoz mash [Ministry of Agricultural Machinery] -- 76, Minlegpishchemash [USSR Ministry of Machine Building for Light and Food Industry and Household Appliances] -- 80 percent and so forth. The mentioned ministries must furnish assistance to the republic in making more complete use of the production potential created and this should be taken into account when establishing the tasks of the five-year plan for subordinate enterprises.

The accelerated development of machine building is of great economic and social importance to the republic. The leading development of the electronic and electrical engineering branches and the radio engineering industry and growth in the

production of instrument making products and computer equipment are bringing about profound qualitative changes in the production processes and a sharp increase in the requirements for intellectual labor.

An important role in the work of improving the country's agriculture is played by the modernization and expansion of the Kutaisi Motor Vehicle Plant, which specializes in the production of agricultural motor vehicle trains, and also by the creation of capabilities for the production of light mechanization equipment at the Kutaisi Miniature Tractor Plant Production Association imena Konstitutsiya SSSR.

Considerable qualitative changes came about in machine building as a result of the long term program for developing the productive forces of the Georgian SSR. The successful fulfillment of the program for developing machine building throughout the republic should be viewed as one of the principal economic-political tasks of the Eleventh Five-Year Plan. The solving of this task will make it possible to increase the proportion of machine building and metal working, in the overall volume of production, from 13.8 percent in 1980 to 16.4 percent in 1985.

Serious attention will be given to developing the other branches of heavy industry. Thus the production of chemical industry products during the Eleventh Five-Year Plan will increase by a factor of 1.5 and large scale work will be carried out in connection with the modernization and technical re-equipping of ferrous metallurgy enterprises.

As mentioned in the report delivered before the 26th CPSU Congress by the Chairman of the USSR Council of Ministers N.A. Tikhonov, an important feature of our economic development in the immediate future is the leading development of the production of consumer goods. A leading role in solving this task in the Georgian SSR will be played by light industry -- a large branch of the republic's national economy, the output volume of which will increase by a factor of 1.3 during the Eleventh Five-Year Plan. The principal path to be followed for developing it -- radical re-arming of the branch's technical base. In this regard, great importance is attached to the timely implementation of work associated with the modernization and expansion of the Gori Cotton Production Association, the Tbilisi Silk Production Association and other operating enterprises and associations. New enterprises must be placed in operation during the current five-year plan: a cotton spinning factory in the city of Sachkher, a factory for knitted underclothing in the city of Tskhinvali, branches of operating enterprises in small and medium size cities and also in mountainous and piedmont regions. It is also considered feasible to build a sewn knitted goods factory in Poti for the production of beach items and in Tbilisi -- a factory for non-fabric materials and so forth. It is our hope that the planning organs and the USSR Minlegprom will support these republic proposals.

A complex of measures should be carried out in the near future aimed at achieving more complete use of the considerable potential possessed by the enterprises of heavy industry for producing consumer goods, since this potential was not utilized sufficiently during the Tenth Five-Year Plan. During the 1976-1980 period, enterprises of union subordination located on the territory of Georgia and belonging mainly to the branches of heavy industry failed to supply tens of millions of rubles worth of cultural-domestic goods.

At the present time, a complex special purpose program is being developed in the republic for increasing the production of consumer goods. This program will outline tasks for the production of consumer goods not only for the republic's ministries but also for each enterprise and association of union subordination.

The Basic Directions for the Economic and Social Development of the USSR During the 1981-1985 Period and for the Period Up To 1990 call for an intensification of the role and responsibilities of the republics, krays, oblasts and rayons in the formation of the all-union food fund. It is on this basis that the principal goals and parameters for the development of the branches belonging to the republic's agro-industrial complex have been defined. This will be reflected in the present food program of the Georgian SSR -- a component part of the all-state food program.

The republic's food complex will make a substantial contribution towards satisfying the country's requirements for such valuable products as tea, high quality wines, citrus fruit and canned fruit and vegetables. For the immediate future, the food program of the Georgian SSR will call for improved satisfaction of the requirements of the republic's population for the more important food products and a rapid increase in the production of food products of all-union specialization. This will be promoted by further intensification of agricultural specialization in the Georgian SSR in viniculture, tea production and sub-tropical fruit production.

Great tasks confront the republic's animal husbandrymen. Meat production should be increased to 160,000 tons and milk -- to no less than 710,000 tons. These tasks exceed to a considerable degree the indicators achieved during the Tenth Five-Year Plan.

The task of achieving the planned production volumes for the agricultural products is impossible in the absence of further strengthening of the branch's logistical base. The Basic Directions call for the implementation, during the Eleventh Five-Year Plan, of operations aimed at draining and developing 35,000 hectares of land in the Kolkhida Lowlands and also installing irrigation on an area of 60,000 hectares. Increases will take place in the deliveries to agriculture of various types of equipment, mineral fertilizers, plant protective agents and so forth.

A number of very important problems must be solved in order to develop an important element of the republic's agroindustrial complex -- the food industry. Its output, in accordance with the Basic Directions, will increase by a factor of 1.3 during the Eleventh Five-Year Plan. The fulfillment of this program will ensure a further increase in the contribution by the Georgian SSR towards the all-union production of goods from the viniculture, tea production, canning, essential oil and other typical branches and also more complete satisfaction of the local requirements for diverse food products. The creation of a reliable raw materials base will promote the successful development of the canning industry. The Basic Directions call for the production of canned fruit and vegetables to be increased by a factor of 1.7 during the Eleventh Five-Year Plan. During the 1981-1985 period, the production volume of the viniculture industry will increase by a factor of 1.4, mainly by a considerable increase in the bottling of wines in the republic, especially brand, common, table, natural, dry, semi-dry and also high quality sparkling wines. The tea industry will undergo further development. One of its features during the forthcoming five-year plan will be the priority growth of secondary production. In particular, the

production of natural tea will increase by 29 percent during the 1981-1985 period, thus exceeding by almost twofold the production of baykhovyy tea. The primary task of this branch is that of achieving a sharp improvement in the quality of the Georgian tea.

An important direction to be followed for developing the republic's food industry during the Eleventh Five-Year Plan must be that of eliminating the deficit in capabilities for processing agricultural raw materials, particularly in the viniculture, tea and canning industries. Resources employed for these purposes will be repaid very rapidly. At the present time, during the "peak" season and owing to a shortage of capabilities, the state is losing raw materials the value of which is far greater than the capital investments required for creating the capabilities needed for processing such materials.

The republic's food program must be carried out taking into account improvements in the work and development of other elements of the agroindustrial complex. One very acute problem is that of creating a full-value production infrastructure for agriculture and the processing branches and providing them with refrigerators, storehouse facilities, special transport equipment, packaging materials and so forth.

In the interest of eliminating the deficit in capabilities during the current five-year plan, the plans call for the placing in operation of canning plants for 260 tubes and fruit storehouses and refrigerators for 21,000 tons of one-time storage, as a result of which these capabilities will reach 77-84 percent.

In particular, the problems concerned with the development of machine building for branches in the agro-industrial complex should be singled out. Measures should be outlined for creating and developing the production of equipment for mountainous farming, for cultivating subtropical and southern crops and for commencing the production of light mechanization equipment for agriculture. The complete and timely fulfillment of all of these measures should be ensured. A prerequisite for this will be their inclusion in the five-year plan. The question arose long ago regarding the specialization of the Batumi Machine Building Plant of Minlegpishchemash exclusively in the production of equipment for the tea industry. A principal condition for successfully carrying out the republic's food program is that of solving the mentioned problems and eliminating the existing shortcomings.

A great deal will be accomplished in the near future towards developing all types of mainline transport operations in Georgia. The Basic Directions call for the continuation of construction of the rail line between Marabda and Akhalkalaki, a line which is of great importance for improving the national economy throughout the republic's entire southern region.

At the same time, one acute problem still remains in connection with the further development of railroad transport operations. In particular, in order to ensure the intensive development of the national economic contacts of the Trans-Caucasus economic region on the whole, including the Georgian SSR, a solution for the problem of building the Trans-Caucasus transshipment railroad should be accelerated. At the present time, in connection with the inability to increase the traffic capacity of the existing railroad lines connecting the Trans-Caucasus with other economic regions of the country, the flow of important national economic freight in a southern

direction is being restrained and, as a result, the republic, despite the availability of funds, is annually being deprived of large quantities of logistical resources. The construction of this road, in addition to increasing the volume of imported and exported freight and accelerating the national economic transport operations, will promote improved exploitation of the natural resources in the region's mountainous rayons and raise the level of their economic and cultural development.

During the 26th CPSU Congress, it was emphasized once again that the Communist Party of the Soviet Union, in its varied activities, attaches paramount importance to the welfare of the people. In conformity with the decisions handed down during the congress and the plenums of the CC CPSU and also the statements by the General Secretary of the CC CPSU and Chairman of the Presidium of the USSR Supreme Soviet L.I. Brezhnev regarding the social policies of the party, further improvements must be realized in the welfare of the republic's population during the Eleventh Five-Year Plan.

A considerable increase in the resources to be used for consumption and for non-productive savings is providing the foundation for raising the material and cultural standard of living. During the Eleventh Five-Year Plan, according to existing computations, the consumption fund will constitute approximately three fourths of the entire national income utilized and taking into account the expenditures for housing and socio-cultural construction, more than four fifths of the national income will be employed directly for national welfare. The real per capita income for the republic will be raised by roughly 15 percent during the five-year period. Further increases in the wages of manual and office workers and also increases in the payments and privileges extended to the population from the public consumption funds will serve as the sources for this planned growth.

During the 1981-1985 period, based upon the planned development for branches in material production and in the non-productive sphere, 190,000 additional workers will be attracted into public production. The regular process of leading growth in employment in the non-productive sphere, compared to the productive sphere, will continue. As a result, the proportion of those employed in material production will decrease somewhat. However, taking into account the fact that Georgia lags behind the average union level of general economic and industrial development, it will be necessary to plan a more optimum ratio of employment in the production and non-production spheres.

The rational distribution of production forces will promote improvements in the use of the republic's labor potential. Over a period of dozens of years, the distribution of productive forces in the Georgian SSR has been characterized by their concentration mainly in large cities -- Tbilisi, Kutaisi, Rustava. As a result, the large industrial centers of the republic are experiencing a shortage of manpower at a time when, in other regions of the republic and especially in the mountainous rayons, there is a considerable surplus of labor resources not engaged in public production. Here an undesirable migration of the population into the industrial centers is being observed. This trend, which exists not only in our republic, is mentioned once again in the Basic Directions for the Economic and Social Development of the USSR During the 1981-1985 Period and for the Period Up To 1990 and the recommendation is made to follow consistently a program aimed at limiting the growth of the large cities and

developing the small and medium size ones, with specialized and highly productive production operations and the branches of enterprises and associations being located in these small and medium cities. Based upon this fact and taking into account the specific peculiarities of our republic, the principal trend for improving the territorial organization of production during the Eleventh Five-Year Plan must be that of accelerating the development of the productive forces of the mountainous and piedmont regions, based upon the improved use of local labor and natural resources.

In speaking before a ceremonial meeting in Tbilisi, dedicated to the 60th anniversary of the Georgian SSR and the Communist Party of Georgia and in a discussion with the leaders of the Georgian SSR, L.I. Brezhnev emphasized that considerable reserves are available within the republic for raising the efficiency of industrial production and that their utilization requires, in particular, rhythmic operations by all enterprises and strict fulfillment of their individual plans. Special importance is being attached to fulfilling the tasks for raising labor productivity. L.I. Brezhnev devoted a great amount of attention to the methods for eliminating the degree to which the Georgian SSR has fallen behind in terms of certain important indicators of economic development, for example, the production of agricultural products and especially meat, milk and eggs. One vital problem is that of striving to achieve the rational and thrifty use of material resources and to reduce losses.

The workers of Soviet Georgia, after having launched an extensive socialist competition for the successful implementation of the party's plans and the historic decisions handed down during the 26th CPSU Congress and the 26th Congress of the Communist Party of Georgia, aimed at achieving further socio-economic progress, will make their own worthy contribution towards strengthening the country's economic potential and multiplying the material and spiritual values of the Soviet society.

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REGIONAL DEVELOPMENT

ALL-UNION SEMINAR ON REGIONAL PRODUCTION COMPLEXES HELD

Moscow EKONOMICHESKAYA GAZETA in Russian No 30, Jul 81 p 6

[Article by N. Kozlov, Belgorod: "Formation of a Territorial Production Complex"]

[Text] Recently, an all-union seminar was held in Belgorod on the subject "The Formation of Territorial-Production Complexes -- An Important National Economic Task of the Eleventh Five-Year Plan." The seminar was organized by the All-Union Znaniye Society, the Belgorodskaya Oblast CPSU Committee, the Council for the Study of Productive Forces of USSR Gosplan and by EKONOMICHESKAYA GAZETA. The seminar was opened by the 1st Deputy Chairman of the administration of the All-Union Znaniye Society, Professor Yu. Karabasov. The principal reports were delivered by a Secretary of the Belgorodskaya Oblast party committee V. Sobolev, the Deputy Chairman of USSR Gosplan A. Bachurin, the Chairman of the Krasnoyarskiy Kray Plan G. Shabayev, the Chairman of the USSR Gosplan Interdepartmental Committee for the Western Siberian Oil and Gas Complex V. Kuramin, a department head at SOPS [Council for the Study of Productive Resources] of USSR Gosplan G. Kopanov, a department head at TsENII [Central Scientific Research Institute of Economics] of RSFSR Gosplan Yu. Sobolev, a department head at SOPS of USSR Gosplan G. Granik, the Deputy Chairman of the Committee for the Study of Productive Forces and Natural Resources of the USSR Academy of Sciences V. Shelest, a department head at the Institute of Complex Transport Problems of USSR Gosplan N. Razdobud'ko and the Deputy Chief Editor of EKONOMICHESKAYA GAZETA V. Filippov. Scientists and party and economic workers from the KMA [Kursk Magnetic Anomaly] participated in the work of the seminar.

KMA Experience

Gubkin, Staryy Oskol... Rayon cities in Belgorodskaya Oblast. The entire history involved in the study and development of the KMA is associated with them -- from Lenin's notes to G. Krizhizhanovskiy in the spring of 1922 -- "This work must be carried out in a very energetic manner" -- to the present time. In Gubkin, the first mine was built back in the 1930's. A unique production operation is being created in Staryy Oskol for the direct recovery of iron from ore, with no use being made of the traditional blast furnace and converter departments. There is good reason for it being referred to as the first metallurgical production effort of the next century.

Today the entire KMA region, which embraces several oblasts, is a gigantic construction site. In conformity with the decisions handed down during the 26th party congress, the formation of a territorial production complex of all-union importance is continuing here.

The KMA complex is unusual even according to our standards. In it are concentrated up to 40 percent of all of the country's known iron ore reserves. During its formation, the regularities and problems typical of the development of other TPK's [territorial production complex] were apparent. This is why those who participated in the seminar displayed special interest in this complex. They visited the mining-metallurgical enterprises in Gubkin and Staryy Oskol. The chief engineer of the Oskol Electrometallurgical Combine (presently under construction), Doctor of Technical Sciences V. Kudryavtsev, acquainted them with the prospects for the development of non-blast furnace metallurgy.

The report delivered by the Secretary of the Belgorodskaya Oblast Party Committee V. Sobolev and the speeches delivered by other participants in the seminar were concerned mainly with such problems as the complex development of the unique natural resources found in the KMA, the proper combining of those branches engaged in the complex's principal specialization and the timely development of the production and socio-domestic infrastructure.

Considerable Contribution To the Economy

The formation and development of a TPK represents a new trend in the practice of socialist planning. Its purpose is to achieve better territorial organization of production operations, raise the efficiency of capital investments and accelerate the rates of growth for labor productivity. The principles involved in the formation of a TPK and the role they play in a single national economic complex for the country, in the rapid development of natural resources and in raising production efficiency were examined in the reports delivered by department heads G. Kopanov and G. Granik for the Council for the Study of Productive Forces of USSR Gosplan. The powerful economic potential of a developed socialist society makes it possible to carry out large-scale programs aimed at developing new regions and to employ the latest scientific and engineering achievements for this purpose.

A clear example of this is the Western Siberian Oil and Gas Complex. The report by V. Kuramin on the problems encountered in the formation of this complex was listened to with interest by those participating in the seminar. Tyumen' today furnishes the national economy with more than one half of the oil and more than one third of the natural gas being procured throughout the country.

During the Tenth Five-Year Plan alone, we obtained almost 1.2 billion tons of oil and in excess of 230 billion cubic meters of gas from western Siberia. Never before had international practice encountered such rates for the development of oil and gas deposits. One hundred years were required in order to obtain one billion tons of oil from the deposits at Baku. This same quantity of raw materials was obtained in just 25 years from deposits in the Tatarskaya ASSR. Western Siberia furnished its first billion tons of oil in just 14 years.

Such are the results of intense labor. Other territorial-production complexes have been created and are in operation -- Kansk-Achinsk, Yuzhno-Yakutsk, Pavlodar-

Ekibastuz, Yuzhno-Tajik, Sayanskiy, Timano-Pechora, Karatau-Dzhambul, Orenburg, Mangyshlak and Bratsko-Ust'-Ilimskiy (see diagram). Their contribution to the country's economy is becoming increasingly more important.



Key:

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|---|---|
| 1. Principal territorial-production complexes of the USSR | 9. KATEK [Kansk-Achinsk Fuel-Energy Complex] |
| 2. KMA [Kursk Magnetic Anomaly] | 10. Karatau-Dzhambul |
| 3. Timano-Pechora | 11. Yuzhno-Tajik |
| 4. Orenburg | 12. Yuzhno-Yakutsk |
| 5. Mangyshlak | 13. Complexes in the BAM [Baykal-Amur Trunkline] zone |
| 6. Pavlodar-Ekibastuz | 14. Sayanskiy |
| 7. Western Siberian | 15. TPK zones |
| 8. Bratsko-Ust'-Ilimskiy | |

Role of the Eastern Regions

Territorial-production complexes are being developed in inhabited regions of the country, regions which already have a powerful economic potential and high population concentrations, and also in weakly developed territories based upon the use of highly efficient natural resources. The formation of each one of them has beyond any doubt accelerated the solving of large-scale national economic tasks. For example, the Bratsko-Ust'-Ilimskiy Complex in Siberia, within a short period of time, was transformed into a power industrial base in the eastern part of the country. It satisfies a considerable portion of the all-union requirements for aluminum, cellulose, it supplies the metallurgists in the Kuznets Basin with iron ore raw materials and it produces electric power on a large scale. The legendary Bratsk and Ust'-Ilimskiy GES's are in operation here today. The Bratsk Lumber Complex has been created; here the processing of wood, including cellulose production, has been organized.

In the accelerated development of the economies in the eastern regions of the country and in the utilization of their unique natural resources, an important role will be played by the economic development of the BAM [Baykal-Amur Trunkline] zone and by the formation within its borders of a number of TPK's. These problems were mentioned in the report delivered by Yu. Sobolev, a department head at TsENII of the RSFSR Gosplan.

During the seminar, numerous examples were cited showing how the extensive use of this progressive form for the territorial organization of an economy -- a TPK -- exerts a beneficial effect with regard to achieving the final national economic results with minimal expenditures. The Sayanskiy TPK in Siberia is truly one such example of rapid, dynamic and all-round development of a territory. Here, in the very center of Siberia and within a brief historical period, a powerful economic region has appeared which is characterized by specialization in electric power engineering, the electronics industry, ferrous and non-ferrous metallurgy, chemistry and machine building.

The principle of territorial organization of the economy of the Sayanskiy Complex -- a grouping of enterprises according to their production associations -- brought about the formation in its structure of powerful industrial centers -- Abakan, Minusinsk, Chernogorsk and Sayanogorsk. In his report, G. Shabayev emphasized that each of these centers is a leading branch of specialization. For example, machine building and ferrous and non-ferrous metallurgy predominate at the Abakan Industrial Center, whereas at the Chernogorsk center -- enterprises of light industry. The Minusinsk Industrial Center is being formed based upon a powerful electrical engineering complex, the structure of which includes 12 enterprises of the electrical engineering industry at one industrial site. Such a high concentration of production operations, combined with reserves of diverse raw materials, will first of all promote a considerable acceleration in developing the resources of Siberia and, secondly, it will multiply the final national economic results.

Our principal production capabilities and labor resources are still concentrated in the European part of the country, whereas the main fuel-energy and raw material reserves for developing the national economy are located beyond the Ural Mountain chain, in Siberia and the Far East.

The Basic Directions for developing the country's national economy call for radical improvements in the territorial distribution of productive forces and for the transfer of considerable volumes of industrial production into the eastern regions. Thus the formation of TPK's which are special purpose in nature and also the all-round development of resources on new territories are becoming factors of long-term importance. The successful development of these regions is influencing to a considerable degree the economic and social development of our entire society. And the importance of TPK's insofar as the national economy is concerned, in Siberia and the Far East, will on the whole continue to increase.

Harmony and Discord

During the current five-year plan, we are confronted by a more complicated and responsible stage in the development of territorial-production complexes: the

structure of the production operations and economic branches is becoming more complicated, the production volumes of the processing branches are growing and accordingly the volumes of capital investments are increasing. For example, during this current five-year period the volume of drilling work to be carried out within the Western Siberian TPK must be increased by a factor of 2.5 compared to the figure for the Tenth Five-Year Plan. The need for developing new deposits that are located at some distances from already established bases and lines of communications will require a sharp increase in the volume of transport operations, in the creation of electric power lines, in the construction of highways and in providing the necessary facilities for new settlements and villages.

Under such conditions, greater importance is attached to taking into account the experience that has been accumulated in the formation and development of territorial-production complexes and to finding the means for rapidly solving the problems that have developed.

One of the more vital problems is that of further working out the problems concerned with the planning and administration of territorial-production complexes. The organizations and enterprises of dozens of ministries participate in the formation and development of TPK's. In a number of instances, departmental dissociation began to appear as complications developed in the production associations. An example of this -- the departmental attitude of USSR Minchermet [Ministry of Ferrous Metallurgy] towards the development of the mineral resources of the KMA. During the course of extracting iron ore, the miners were at the same time throwing into the dump heap a tremendous amount of attendant valuable minerals.

Still another example was cited during the conference. In constructing the Tyumen'-Urengoy Railroad, the ministries of railways and transport construction "overlooked" the development of spur tracks leading to the industrial enterprises. The result is that today the various departments (despite the fact that they lack experience in such construction) are each building their own railroad sidings. One can easily imagine what the cost must be for each kilometer of railroad bed and also the cost to the state for rolling stock idle time on such primitively organized loading and unloading spur tracks. The national economic approach for developing the transport network in connection with the formation of TPK's, as noted in the report by a department head at the Institute of Complex Transport Problems of USSR Gosplan N. Razdobud'ko, is making it possible to accelerate the creation of the complex and to realize considerable opportunities for raising production efficiency and achieving economies in the use of material, labor and financial resources.

In work carried out recently in connection with improving planning, in light of the decisions handed down during the 26th party congress, a great amount of attention was given to the territorial aspect of the plans and to improving the coordination of branch and territorial planning. The inclusion in the state plans for economic and social development of tasks for the complexes, the development of special purpose territorial programs and the measures undertaken to improve the administration of the complexes, as mentioned in the report by the Deputy Chairman of USSR Gosplan A. Bachurin, are making it possible to raise to a new and higher level all organizational work associated with the creation of TPK's.

Improvements in the Administration of TPK's

Interdepartmental committees must put an end to departmental dissociation in the development of TPK's. A committee of the USSR Council of Ministers has been formed to handle problems concerned with the development of the Western Siberian Oil and Gas Complex and also an interdepartmental territorial committee of USSR Gosplan located at Tyumen'. "These are steps in the right direction" stated L.I. Brezhnev during the 26th CPSU Congress, "They are helping to achieve better control over the territorial-production complexes and they are making it possible to take into account and combine, in a better manner, regional and branch interests. Such work must be continued."

The initial operational experience of the interdepartmental territorial committee of USSR Gosplan for the western Siberian complex was revealed during the seminar. The committee can play an important role in raising the level of all-round development of natural resources. An instrument for this would be planning solutions and the development of carefully balanced draft plans. Subsequently the committee could influence the process of harmonious development of a territorial-production complex through the preparation of specific recommendations for the state plan for economic and social development of TPK's and also for controlling fulfillment of the plans.

The problems of controlling the use of natural resources and protecting them on the territories of TPK's were discussed thoroughly during the seminar.

Both in the principal reports and in a number of statements made during a "round-table" discussion, proposals were introduced for defining the scientifically sound borders of TPK's and creating scientific subunits having special purpose tasks -- participating actively, directly at the sites, in the further development of the complexes. The journalists who participated in the work of the seminar discussed the experience accumulated in publicizing in the press the problems concerned with the formation of TPK's.

The elimination of the disproportion in the development of TPK's will make it possible to uncover more completely the reserves that are available for this efficient form for organizing public production.

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